

**Committee on Energy & Commerce
Subcommittee on Energy & Power
Preliminary Questions for the Federal Energy Regulatory Commission
July 29, 2014**

The following questions relate to the U.S. Environmental Protection Agency's ("EPA") recently proposed "Clean Power Plan." See Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 34830 (June 18, 2014), referred to herein as the "Proposal" or "Clean Power Plan."

Interagency and State Coordination

1. During an Energy & Power Subcommittee hearing on June 19, 2014, EPA Acting Air Administrator Janet McCabe testified that electric reliability "was paramount in our minds as we worked through the proposal" and that EPA "consulted with FERC and DOE and other agencies that have this as a chief responsibility." She stated that "I or my staff have consulted with staff at FERC. They are part of the interagency review process that we always go through, and so they have given us their input on electric reliability."

a. Describe each consultation you have had with EPA regarding the Proposal, including where it occurred, the date(s) on which it occurred, with whom it occurred and identify any other participating agencies. Also provide details of the outcome of those consultations and relevant materials relating to those consultations.

Answer: *EPA did not consult with me.*

b. Did EPA request that FERC provide written advice or an analysis regarding the potential impacts of the Proposal on the reliability of the electric grid? If yes, provide a copy of the request and any resulting advice or analysis.

Answer: *EPA did not request this of me or my office. As to FERC generally, please refer to Chairman LaFleur's response.*

c. Are you aware of any outreach by EPA to the North American Electric Reliability Corporation (NERC) regarding reliability impacts prior to issuing the Proposal? If yes, to your knowledge what was the nature of that outreach?

Answer: *If EPA did so, I am unaware of it.*

2. The Proposal includes a Technical Support Document entitled "Resource Adequacy and Reliability Analysis." See EPA-HQ-OAR-2013-0602-0368.

a. Did FERC prepare this analysis?

Answer: *Please refer to Chairman LaFleur's response.*

b. To your knowledge, did NERC prepare this analysis?

Answer: *I do not know.*

c. To your knowledge, did FERC or NERC assist in the preparation of this analysis or consult with EPA regarding its preparation or its results? Please provide relevant details and materials.

Answer: *I did not. As to FERC generally, please refer to Chairman LaFleur's response.*

d. Did FERC have an opportunity to review this analysis before the Proposal was announced?

Answer: *I did not have an opportunity to review the proposal.*

e. Has FERC independently reviewed this analysis? Does FERC agree with EPA's conclusion that the "proposed rule will not raise significant concerns over regional resource adequacy or raise the potential for interregional grid problems"? See 79 Fed. Reg. at p. 34899.

Answer: *It is my understanding that FERC staff is reviewing the analysis. Due to the ambiguity of the EPA proposal at this time, I am not able to personally verify the conclusion that the "proposed rule will not raise significant concerns over regional resource adequacy or raise the potential for interregional grid problems." Assuming the rule survives legal challenge, I believe it is imperative there be an independent, third-party review of the state, regional or federal implementation plans that arise from it to ensure that, as they are stitched together, the bulk power system remains reliable.*

3. The Proposal states that the "EPA and other federal entities, including . . . the Federal Energy Regulatory Commission (FERC) . . . are committed to sharing expertise with interested states as they develop and implement their plans." Please explain when and in what manner FERC expressly "committed" to sharing its expertise with States. Please provide relevant details and materials.

Answer: *While I am always willing to engage in dialogue with my state colleagues regarding issues of mutual interest, including the impact of EPA rules, I am unsure of EPA's specific reference.*

Clean Power Plan Impacts on Fuel Diversity and Electric Reliability

1. Has FERC independently analyzed EPA's Clean Power Plan to determine the impact it could have on generating unit retirements and potential impacts on fuel diversity and electric reliability? If yes, what were the results of this evaluation? If not, does FERC intend to independently analyze the Proposal to evaluate potential impacts on fuel diversity and electric reliability?

Answer: *To my knowledge, FERC has not conducted such analysis. I would be supportive of such an analysis and believe FERC could provide a valuable service to EPA, Congress and the states by doing so. It would be difficult to conduct one at this time, however, since no one yet knows how the rule will be implemented.*

2. EPA projects nearly 180 gigawatts of generation capacity will retire between 2010 and 2020 in response to the Clean Power Plan and other factors, such as EPA's previously finalized Mercury and Air Toxics (MATS) rule. EPA's Option 1 model specifically identifies each electric generating unit expected to retire by 2020 by name, location, and capacity. See EPA-HQ-OAR-2013-0602-0368 and EPA-HQ-OAR-2013-0602-0220.

a. Does FERC staff possess the expertise to complete an independent reliability assessment that (i) geographically plots each of the specific units identified in EPA's model for retirement and each unit that has

already retired or announced retirement; and (ii) evaluates the potential regional, state, and local reliability impacts resulting from such retirements?

Answer: Yes, though as Chairman LaFleur notes in her response, any analysis would be highly dependent on the assumptions made regarding inputs to the model.

b. Will you commit to having FERC staff complete such an independent assessment prior to October 1, 2014, so that the public may understand the potential impacts on reliability prior to submitting comments on the Proposal, due on October 16, 2014? If not, why not?

Answer: As I noted previously, a FERC analysis of the potential impacts on reliability could prove valuable. I am concerned we would be unable to produce much of value by October however, because the EPA proposed rule is so vaguely defined in terms of what would constitute acceptable compliance.

Clean Power Plan Impacts on Electricity Markets

1. Would existing organized wholesale electricity markets have to be redesigned to implement EPA's Proposal? For example, are Regional Transmission Organizations (RTOs) prepared to transition from economic to environmental dispatch? Did EPA consult with FERC regarding the feasibility of switching from economic to environmental dispatch? What RTO implementation challenges would environmental dispatch present?

Answer: There has been some speculation that the state and regional carbon compliance plans might envision requesting FERC to authorize the various RTOs to transition away from the security constrained economic dispatch model towards some form of dispatch based on carbon emissions. Some have even suggested RTOs themselves should impose a carbon cost on the market before dispatching units. Any such changes to the markets would clearly require FERC approval. Should such proposals be filed, we would have to consider whether they are permissible under the Federal Power Act. As Chairman LaFleur notes, the Commission has allowed RTOs to acknowledge the operating limits of certain plants. Also the Commission allows generators to recognize various governmentally imposed costs like taxes and cap-and-trade schemes, but this is simply a matter of allowing generators to bid-in costs they have legally incurred. To go beyond that by changing the fundamental market dispatch algorithms in the ways some have suggested would be a major change, to say the least. EPA did not consult with me regarding this issue. I am unaware if they consulted with other FERC employees or Commissioners.

2. EPA's Proposal wrongly assumes States dispatch electricity. Given that electricity is actually dispatched by RTOs or other market operators on the basis of competitive market results, how would State compliance plans be implemented in electricity markets?

Answer: If a state compliance plan envisioned changes in market operations, such changes would need to be proposed to and approved by FERC. The implementation of state compliance plans would strongly depend on the methodology(ies) used to achieve compliance with the Proposal. As a general matter, implementation issues in regional markets could increase in complexity as the variability between state implementation plans in a region increases.

a. Would a State Implementation Plan (SIP) take priority over market dispatch performed by an RTO?

Answer:

As stated in my previous answer, changes to FERC-regulated wholesale markets caused by state compliance plans would have to be proposed to, and approved by, FERC. If those changes were approved, the extent to which market dispatch is reprioritized would largely depend on the specific nature of the state compliance plan. An environmental-based dispatch mechanism, as discussed above, would alter security constrained economic dispatch by shifting the priority towards carbon output. On a smaller scale, a state compliance plan that achieves reductions by placing limits on an individual plant's operations would also reprioritize market dispatch for that unit.

b. Would a SIP take priority over bilateral contracts between a buyer of power in one State and a seller of power in another? If so, how, and what is the authority for this?

Answer: *Any wholesale sale of electricity such as bilateral contracts entails some form of FERC oversight; however, the terms of such sales can be highly specific so I would hesitate to predict how a SIP might affect these contracts.*

c. Would a State have authority to compel the continued operation of existing nuclear power plants if those plants are not being dispatched in wholesale electricity markets because their bid costs are too high compared to other generation?

Answer: *States do not have authority to unilaterally compel dispatch of a unit in a FERC jurisdictional wholesale market; however, states retain many regulatory tools at their disposal that could ensure the continued viability of nuclear plants, even if they are facing difficult market headwinds.*

d. How would RTOs reconcile conflicting SIPs within a region?

Answer: *I am unable to answer that question at this point due to the uncertainty over what the SIPs might eventually entail. However, the issue of RTOs dealing with multiple SIPs and the issue of multiple RTOs within a single state may be extremely challenging and any change to these markets must be approved by FERC.*

3. EPA's Proposal is silent on the treatment of purchase power agreements and interaction of energy markets for States that are net importers versus exporters. Do you believe that EPA's Proposal adequately addresses interstate power flows?

Answer: *I have heard questions posed by some states regarding their emissions targets in relation to the nature of their energy imports and exports. At this point, I have more questions than answers.*

4. Do you believe that EPA's Proposal could result in stranded financial investments for units that have been retrofitted with emissions controls for other programs, such as EPA's MATS rule? What impacts could this have on the owners of stranded assets, wholesale energy markets and consumer electricity costs?

Answer: *Yes, I believe the proposal could cause stranded investments. Furthermore, the ambiguity in the proposed carbon rule undoubtedly makes it very difficult for existing plant owners to know whether they should invest anything now to comply with other regulatory requirements or whether they should simply pull the plug on the asset immediately. The impacts of stranded investments vary region to region. In traditionally regulated states, consumers may be obligated to pay for stranded investments via the regulatory*

compact that exists. In states served primarily by wholesale merchant generators, it is likely that the owners and investors in the companies would bear the costs associated with stranded investments.

Increased Reliance on Natural Gas, Renewables and Energy Efficiency

1. EPA's Clean Power Plan contemplates natural gas combined cycle (NGCC) plants running at a 70% capacity factor to displace a significant amount of coal-fired generation. EPA's regulatory impact analysis projects pipeline capacity increases of 4-8% beyond base case projections by 2020.

a. Has FERC analyzed whether the natural gas infrastructure exists to reliably serve NGCC plant needs while preserving reliable gas service for non-power generation use?

Answer: FERC has spent a great deal of time and resources analyzing the changes that may need to happen due to the increasing reliance on natural gas as a fuel for generating electricity. To this point, FERC has not been able to assess specifically what the EPA proposed rule would mean in this regard since we do not know what the implementation plans will look like. However, it is safe to say that the proposed rule would likely lead to even greater dependency on natural gas, which makes gas-electric coordination efforts even more critical in future years.

b. Did EPA consult with FERC regarding the adequacy of natural gas infrastructure prior to publishing its Proposal?

Answer: I was not consulted, but I reference Chairman LaFleur's answer with regard to FERC generally.

c. Given the challenges of gas supply in the most recent winter, and continued concerns about gas deliverability to certain parts of the country, do you agree with EPA that its modeled capacity increases are feasible by the initial compliance date of 2020?

Answer: Depending on how the various implementation plans turn out, this could be an issue of concern. If large numbers of states look to pivot to gas generation over a short period of time, adequate access to reliable fuel sources will be paramount. This is one reason, as I noted in a previous response, that I believe it is imperative for an independent, third-party to verify that the implementation plans are designed in such a way that bulk power reliability is not threatened.

2. Has FERC completed any electric transmission system capability and reliability analysis that demonstrates that the increases in NGCC plant utilization that EPA assumes in its proposal could replace retired coal-fired generation are practicable, taking into account the location of the coal plants being retired and the location of existing NGCC plants?

Answer: Not that I am aware of, and I note Chairman LaFleur's response indicates not.

3. Has FERC analyzed the integration issues (e.g., voltage control, natural gas backup power, etc.) associated with a substantial expansion and deployment of intermittent renewable energy resources, as contemplated by EPA's Clean Power Plan? Did EPA consult with FERC regarding these integration issues?

Answer: I reference Chairman LaFleur's response, and separately note that these issues are legitimate operational concerns when integrating large amounts of intermittent resources into the grid. A great deal of

work is going into addressing integration issues through the efforts of individual utilities, RTOs, research entities, FERC and others, in addition to NERC.

4. Has FERC studied whether under the EPA Proposal additional transmission lines would need to be built to integrate more renewables, where the lines may be built, and how long it may take to site, permit and build these lines? Has FERC estimated the cost of transmission necessary to supply increased renewable resources under EPA's Proposal?

Answer: I do not believe FERC has done so, but given the uncertainty of what compliance plans might entail, it is probably still too early to tell.

5. The Clean Power Plan would facilitate the rapid expansion of renewable resources, particularly rooftop solar underwritten by long-term leases.

a. Has EPA requested, and has FERC conducted, an analysis of the potential reliability impacts associated with a rapid rise in the use of variable generating sources?

Answer: Please refer to Chairman LaFleur's response.

b. Do you believe that rapid changes in the use of variable generation sources could pose challenges to electric reliability on a local or national basis?

Answer: If not properly accounted for and managed, yes.

6. The Clean Power Plan contemplates significant increase in energy efficiency and demand-side management. How would the increased role of energy efficiency and demand-side resources impact wholesale energy markets? Reliability? Can FERC regulate such resources, particularly given the recent court ruling vacating FERC's Order No. 745?

Answer: Again, I would suggest it is too early for me to be able to definitively answer that question because I do not yet know what the various compliance plans will entail, but it would appear demand side management will be a part of many of them. In the DC Court of Appeals decision, I found the majority opinion to be correct in many respects (especially as it related to compensation of demand response) and not unreasonable as it related to the jurisdictional question. Nonetheless, the Commission did request a partial rehearing en banc related to the issue of jurisdiction. Ultimately, I believe given an adequate transition time, even if the DC Court decision stands, it is far from the end for demand response. It would simply mean that demand response would need to participate in the retail (state) side of the market rather than in the wholesale (FERC) side. Even still, demand reductions would continue to be used as a tool for meeting reliability needs. Therefore, regardless of who wields the jurisdictional hammer, regulatory agencies must continue to pursue adequate rules governing energy efficiency and demand response operations in order to ensure system reliability.